Docket No.: GB920010007US1 (7161-224U)   **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of   :   Customer Number: 46320
                                              :
Paul ABBOT   :   Confirmation Number: 9940
                                              :
Application No.: 10/046,058   :   Group Art Unit: 2134
                                              :
Filed: January 10, 2002   :   Examiner: C. Brown
                                              :
For: METHOD AND APPARATUS FOR STORAGE OF SECURITY KEYS AND
        CERTIFICATES

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

    This Reply Brief is submitted under 37 C.F.R. § 41.41 in response to the EXAMINER'S

ANSWER dated August 16, 2007.

    The Examiner's response to Appellant's arguments submitted in the Appeal Brief of June

1, 2007, raises additional issues and underscores the factual and legal shortcomings in the

Examiner's rejection. In response, Appellant relies upon the arguments presented in the Appeal

Brief of June 1, 2007, and the arguments set forth below.

1

2   On pages 4-6 of the Second Appeal Brief, Appellant presented arguments that the

3   Examiner's asserted motivation to modify Kausik in view of Bahls would not have led to the

4   claimed invention. Specifically, one having ordinary skill in the art would not have looked to

5   fragment entities in the form of a key since keys are very small compared to the size of storage

6   that existed at the time of the invention. In response to these arguments, the Examiner initially

7   asserted the following in the paragraph spanning pages 8 and 9 of the Examiner's Answer:

8   The appellant in forming a stance against the present rejection has cited to portions of
9   Bahls, which state that it is not necessary to fragment a data object if the data object is smaller
10   than the available storage capacity of the working storage. The examiner asserts, however, that at
11   the time of the cited art of Bahls, circa 1995, storage in many devices especially those envisioned
12   in this combination such as PDA devices and other small portable electronics contained very small
13   memory that was shared between multiple applications. Bahls teaches that the working storage
14   represents a finite amount of memory (Bahls Col 1 lines 24-25), which is shared between multiple
15   applications. Bahls further recites that large data objects can render an application incapable of
16   performing their functions and that any data object that is larger than the working storage is
17   defined as a large data object for the purposes of the disclosure (Bahls Col 1 lines 36-47). At the
18   time of this disclosure the working storage for such a device as a PDA was clearly-within the
19   range that segmentation of an object the length of a key or even more so a certificate, which is
20   generally many times larger than a key since a certificate often contains a key and other
21   information such as a message digest, when shared with other applications would have required
22   being split up as set forth by the current combination and thus then would be a viable and
23   reasonable combination. (emphasis added)
24

25   The Examiner's response relies upon the assertion that the size of storage, at the time of

26   the invention, was much smaller for "PDA devices and other small portable electronics." Thus,

27   the Examiner is arguing that one having ordinary skill in the art could have applied the proposed

28   combination of Kausik and Bahls to devices with allegedly small memory (e.g., PDA devices

29   and other small portable electronics), in which case, as alleged by the Examiner, the

30   segmentation of the key could occur.

31

32   This analysis by the Examiner, however, lacks any factual context and essentially ignores

33   the teachings of Bahls and whether or not one having ordinary skill in the art would have applied

1   the teachings of Bahls to "PDA devices and other small portable electronics." The date relied

2   upon by the Examiner (i.e., "circa 1995") is also improper since obviousness is determined "at

3   the time the invention was made."[1] Thus, the Examiner should have considered the size of

4   memory in PDA devices circa 2001-2002.

5

6   Regarding the facts, the Examiner has not presented any. The Examiner's allegations

7   regarding what was the statement of the art "circa 1995" lacks any substance or factual support.

8   Notwithstanding the Examiner's failure to present any facts regarding the state of the art in 1995,

9   PDA devices at that time had memory size of approximately 2MB,[2] which is still considerably

10   larger than the size of the key or certificate used at the time. Thus, Appellant respectfully

11   submits that one having ordinary skill in the art in 1995 would not consider keys or certificates to

12   be a type of data entity that would require segmentation in order to fit into storage.

13

14   Further analysis regarding Bahls' applicability to PDAs is found in the first full paragraph

15   on page 9 of the Examiner's Answer and reproduced below:

16   > The appellant's example of a system wherein the storage capacity is 40 gigabytes is an
17   > extremely narrow example of one embodiment and within such a case something such as a key
18   > may not be fragmented depending upon the size of the working storage, which Bahls states is of a
19   > variable size and not generally understood as being a hard drive, which is so large, but rather
20   > memory which is much more limited (Bahls Col 3 lines 24-25). Additionally, the intended
21   > embodiment of a device such as a PDA sets forth an embodiment which clearly would require
22   > segmentation and does not have vast amounts of storage capacity as cited by the appellant
23   > especially circa 1995, which is the time of the disclosure of Bahls. Therefore, when taking into
24   > consideration the state of devices present at the time of the disclosure of Bahls and the limited
25   > amount of memory available to those devices especially in the context of a PDA or other small
26   > portable device one of ordinary skill in the art would have been motivated to make such a
27   > combination and such a combination clearly would provide for splitting a key or certificate as
28   > disclosed by the appellant since the size of storage in these devices would have been very limited.
29   > (emphasis added)
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[1] 35 U.S.C. § 103.
[2] http://en.wikipedia.org/wiki/Sharp_Zaurus.

3

1   Appellant respectfully submits that the Examiner's analysis ignores whether or not the

2   system of Bahls would be applicable to PDAs or other small portable electronics. Referring to

3   column 1, lines 43-66, Bahls describes a need to have large data objects segmented and stored

4   both in an application's working storage and in a shared storage medium. Also, the segments of

5   the data objects stored in the shared storage medium could not be accessed by other applications.

6   Referring to Fig. 1, Bahls illustrates separate applications 110, 118, 114, respectively, with

7   individual working storage 112, 120, 116, and a shared queue 104.

8

9   Thus, based upon the teachings of Bahls, the architecture of Bahls' system includes at

10   least two applications, each having respective working storage, and a shared queue, which

11   constitutes additional storage. The Examiner's analysis, however, has failed to factually establish

12   that any PDA or other small portable electronics device, either circa 1995, 2001-2002, or even

13   today, has such an architecture. In fact, Appellant is unclear why a PDA or other small portable

14   electronics device would employ such an architecture since this architecture is more applicable

15   to large data processing systems with a central database (e.g., the shared queue) and client

16   computers (e.g., the separate applications) than with a PDA in which only a single application is

17   typically being executed at any given time.

18

19   For example, reference is made to column 5, lines 19-30, which describes a practical

20   application of Bahls' system. In this passage, Bahls describes the system as a bank's transaction

21   processing system. As can be readily envisaged, each of the separate applications 110, 118, 114

22   could represent separate bank offices that are requesting data objects from a central repository of

23   information (e.g., the shared queue 104). In such a situation, a data object could be larger than

1   the capacity of the working storage of an individual application to handle the data object. In

2   such an instance, the data object is segmented according to the teachings of Bahls.

3

4   In PDAs, however, only a single memory device is typically present and all applications

5   have access to the same memory device. Moreover, there would be no "shared queue" separate

6   from the working storage of the applications and no ability to segment the data object in and

7   separate store segments of the data object in a working storage of the application and a "shared

8   queue."

9

10   As noted above, Bahls is directed, in part, to preventing an application different than the

11   original application from accessing a segmented portion of the data object. If at least two

12   applications are not capable of accessing the same data object at the same time, then such a

13   concern is not present. The Examiner, however, has failed to <u>factually establish</u> that PDAs or

14   other small portable electronics device, at the time of the invention, could have multiple

15   applications running at the same time that could access the same data object in a shared queue.

16   Without this fact being factually established, the Examiner's analysis rests on nothing more than

17   speculation.

18

19   Reference is also made to column 4, lines 17-26, which supports the notion that the

20   applications 110, 114, 118 could be implemented using a different computer. However, where

21   the applications 110, 114, 118 are on a single computer, Bahls teaches that the shared queue is

22   implemented using another computer. Thus, the teachings of Bahls state that at least two

1   computers are used. Such a teaching is inconsistent with a PDA, which is not considered to be

2   "at least two computers."

3

4   As to the underlined passage in the above-reproduced passage, reference is made to

5   column 4, lines 31-48 of Bahls, which states that memory also includes a hard disk drive. Thus,

6   the Examiner's assertion that the working storage is "not generally understood as being a hard

7   drive" is incorrect.

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9 —————————————————————————————————————

10   The Examiner further asserted the following in the paragraph spanning pages 9 and 10 of

11 the Examiner's Answer:

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> The recitation of a key being stored with the data object does not necessitate that the key is of the same size as the data object key, which is being split up, but as can be appreciated by one skilled in the art such a key is clearly capable of only being a few bits and can thus easily be stored with the split portions of the data object key or certificate.

17 This analysis by the Examiner again ignores the teachings of Bahls. As stated in column 3, lines

18 41-51, "a private key [is generated] that is unique among all data objects and applications." A

19 key "being [only] a few bits" would not be considered capable of performing the above-

20 described function. A key of only a few bits, specifically 3 bits, would only be able to uniquely

21 identify 8 data objects A key of 4 bits in length would only be able to uniquely identify 16 data

22 objects. A key of 5 bits in length would only be able to uniquely identify 32 objects.

23 Considering that even a simple address book could contain several hundred data objects, the

24 Examiner's assertion that a key could only be a few bits does not reflect the teachings of Bahls

25 which describes that the private key uniquely identifies both the data objects and applications.

26 Thus, the Examiner's assertion that keys could only be a few bits long is both factually

1   unsupported and appears to have been created in hindsight by the Examiner to support the

2   Examiner's conclusion instead of being a fact that led to the Examiner's conclusion.

3

4   _____

5   Regarding Appellant's arguments as to claims 5, 16, and 27, the Examiner asserted the

6   following in the first full paragraph on page 10 of the Examiner's Answer:

7   The algorithm which determines the manner of splitting the data object of Bahls splits the
8   object based upon the size of the storage space, therefore the algorithm inherently determines the
9   storage location when splitting the object since it does so based upon the size of that location, thus
10   providing for The Algorithm performing both functions (Bahls Col 3 lines 24-25).
11
12 The Examiner's reliance on the doctrine of inherency is misplaced. Inherency may not be

13 established by probabilities or possibilities. The mere fact that a certain thing <u>may</u> result from a

14 given set of circumstances <u>is not sufficient</u> to establish inherency.[3] To establish inherency, the

15 extrinsic evidence must make clear that the missing element must <u>necessarily be present</u> in the

16 thing described in the reference, and that the necessity of the feature's presence would be so

17 recognized by persons of ordinary skill.[4] Furthermore, reference is made to <u>ex parte Schricker</u>,[5]

18 in which the Honorable Board of Patent Appeals and Interferences stated the following:

19   However, when an examiner relies on inherency, it is incumbent on the examiner to point to the
20   "page and line" of the prior art which justifies an inherency theory. <u>Compare</u>, <u>In re Rijckaert</u>, 9
21   F.3d 1531, 1533, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (when the PTO asserts that there is an
22   explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or
23   suggestion appears in the prior art); <u>In re Yates</u>, 663 F.2d 1054, 107, 211 USPQ 1149, 1151
24   (CCPA 1981).
25
26 The Examiner did not discharge that burden of indicating where such a teaching appears in the

27 prior art. The Examiner's only citation is to column 3, lines 24-25 of Bahls, which states

[3] <u>In re Rijckaert</u>, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); <u>In re Oelrich</u>, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981).
[4] <u>Finnegan Corp. v. ITC</u>, 180 F.3d 1354, 51 USPQ2d 1001 (Fed. Cir. 1999); <u>In re Robertson</u>, 169 F.3d 743, 745 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999); <u>Continental Can Co. USA v. Monsanto Co.</u>, 20 USPQ 2d 1746 (Fed. Cir. 1991); <u>Ex parte Levy</u>, 17 USPQ2d 1461 (BPAI 1990).
[5] 56 USPQ2d 1723, 1725 (BPAI 2000).

1   "[w]orking storages 112, 116, 120 may be the same size, or may be different sizes." How this

2   cited passages relates to the Examiner's inherency assertion is entirely unclear. Thus, the

3   Examiner has failed to establish that this limitation is inherently disclosed by Bahls.

4

5

6   Regarding Appellant's arguments as to claim 10, the Examiner asserted the following in

7   the second full paragraph on page 10 of the Examiner's Answer:

8   The limitations of claim 10 as previously stated are old and well known within the art.
9   The. limitations are so well known that the disclosure of Bahls would not be concerned with
10   explaining such a practice since one of ordinary skill would assume that any system of this nature
11   performs those basic steps. The argument is not that it is obvious to try as set forth by the
12   appellant but rather that <u>this is an intrinsic part of any such system</u>. (emphasis added)
13

14   The Examiner's argument that "this is an intrinsic part of any such system" appears to be an

15   inherency argument in disguise. The Examiner, however, has provided no factual support for

16   this Examiner's assertion or the Examiner's assertion that these "limitations are so well known

17   that the disclosure of Bahls would not be concerned with explaining such a practice." In this

18   regard, since the Examiner neglects to provide any factual support for these assertions, how can

19   either Appellant or the Board properly evaluate the Examiner's claims?

20

For the reasons set forth in the Appeal Brief of June 1, 2007, and for those set forth herein, Appellant respectfully solicit the Honorable Board to reverse the Examiner's rejections under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: October 16, 2007

Respectfully submitted,

/Scott D. Paul/
Scott D. Paul
Registration No. 42,984
Steven M. Greenberg
Registration No. 44,725
Phone: (561) 922-3845
CUSTOMER NUMBER 46320